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An

Inaugural Essay

on

Scarlatina

Passed March 1828

For the degree of Doctor of Medicine
in the

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by

Hudson S. Burr
of

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Scarlatina or Scarlet Fever

Scarlet fever is probably a disease of very modern origin. No mention of it is made by the ancient or Arabian authors, and the first time it is distinctly noticed is but little more than two hundred years ago. It has been suspected that the contagion came originally from Africa. Be this as it may, it first broke out in a severe form in Spain in 1610, from whence it spread to Naples, where it raged epidemically in 1618. In 1689 the same disease made its appearance in London, and was discribed by Doctor Morton, though not with the accuracy of the first Spanish and Italian authors.

In 1735 it broke out in North America, and spread gradually but slowly over that continent. One of the most curious circumstances in the history of the disease is the slowness of its diffusion.

When the scarlet fever first appeared in Europe, it was in a very malignant form; but between the years 1660

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and 1670, a febrile disease attended with scarlet eruption was observed by Sydenham in a form so singularly mild, that nosologist have doubted its being really the same disease with that which had previously occurred. Dr Cullen believed it was specifically different.

Dr Withering states, that in his early practice he considered scarlet fever and putrid sore throat distinct diseases, requiring distinct methods of treatment. More enlarged experience however compelled him to renounce that opinion; and he says, that after paying assiduous attention to the subject, by observing the disease in every difference of season, exposure, age and temperament, he was satisfied that they constitute but one species of disease;—that the variations in their appearances depend upon contingent circumstances, and that their greatest differences are not greater than those of the distinct and confluent small-pox."

("Gregory") I have not the least doubt but it was Scarlatina simplex of our present nomenclature.

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Scarlatina receives its name from the peculiarly florid appearance of the skin by which it is accompanied.

It is more prevalent in winter and in spring than in summer and autumn, and more frequently attacks children than adults.

Scarlatina is divided into three forms viz:

1st. Scarlatina Simplex.

2nd Scarlatina Anginosa.

3rd Scarlatina Maligna, this third form is also called Cynancha Maligna or Putrida and Putrid Sore-throat.

Scarlatina Simplex is the simple constitutional disease.

Scarlatina Anginosa is a higher degree of the same disease, the throat being swollen and inflamed.

Scarlatina Maligna is a still higher degree of the same disease, being of a malignant character,

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the throat is inflamed in this species also.

These are the same disease in different degrees, they are related to each other as the distinct and confluent small pox; typhus mitior and typhus gravior; and the several stages of bilious fever.

Scarlatina comes on with anorexia, chilliness, fulness and tension of the head, prostration of strength, nausea and vomiting, the skin is hot florid or otherwise according to the nature of the case. At this period the throat is slightly inflamed, the tongue red, there is more or less of a catarrhal affection; pain in the head, and sometimes a disturbance of the intellectual faculties.— The disease being slight the complaint will be "Simplex" when more severe "Anginosa" and when threatening "Maligna".

In the malignant form of the disease, the patient becomes pale, sick and faint, the intellectual faculties confused, præcordial oppression,

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palpitation of heart, uneasiness of stomach without vomiting, its powers being prostrated, its contents are however thrown up by a spasmodic singultus. The surface is pale with spots of a livid or dark mahogany hue, the eyes exhibit a fatuitous or inebriated expression — death soon takes place, the system being overwhelmed or stunned by a shock it cannot resist.

Such is the progress of a <u>fatal</u> case of <u>Scarlatina Maligna</u>; but in ordinary cases the skin begins to become red, with an efflorescence and there is swelling of the fauces, the pulse then exhibits a character belonging to the commencement of the disease, — the temperature of the body, thirst and scurf on the tongue graduated according to the form of the disease.

The eruption assumes the form of red points or patches which spread over the adjacent part. It appears first on the head and neck, then

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It is admitted that the susceptibility to attacks of the disease is diminished.

Diagnosis. The only disease with which scarlet fever is liable to be confounded is measles. From this it may be distinguished by the character of the eruptive fever, the colour of the skin, and the affection of the fauces.

1. character of the eruptive fever. The efflorescence of this disease appears generally on the second day: In measles; seldom till the fourth. In the Scarlatina it is more full, spreads more and consists of innumerable points and specks under the cuticle intermixed with minute pimples, in some places forming continuous irregular patches, in others coalescing with a uniform flush over a considerable extent of surface

In the measles, the rash is composed of circular dots, partly distinct, partly set in small clusters or patches and a little elevated so as to give the sensation of

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roughness on passing the finger over them; These patches are seldom confluent, but form a number of crescents with large intervening portions of cuticle which retain their usual appearance.

2. Colour of the efflorescence. The colour of the rash in the scarlet fever is like that of a boiled lobster shell; in the measles, of a dark reddish brown like a raspberry.

3. Affection of the fauces. In scarlatina the cough is short, without expectoration; In measles, it is obstinate, harsh, and attended with the discharge of a tough acrimonious phlegm, coming up in repeated efforts.

4. Affection of the eyes. In scarlatina, the redness of the eyes is not attended with intolerance of light, the ciliary glands are not affected; and though they appear watery and shining, they never overflow. In measles, the insensibility to light, and the inflammation of the eyes and eye-lids is considerable: The eyes run tears, and there is great coryza, and sneezing.

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In Scarlatina, depression, anxiety and great weakness attends the fever; in measles, inflammatory symptoms, except in the typhoid variety.
The peculiarity of the tongue in Scarlatina is a good diagnostic, it is heavily incrusted, and through this crust the papillae shoot up, and appear peculiarly florid, they are considerably lengthened in bad cases.—

Prognosis. Great prostration of strength, Coma, distillation of acrid sanies from the fauces, purple appearance of the fauces, with dark sloughs, and accompanied with diarrhoea, permanent recession, or an imperfection of the eruptions, a change of the efflorescence to a mahogany colour are fatal or exceedingly dangerous symptoms. In some cases death has taken place when there has been every appearance of recovery. Where the case is very malignant death will occur on the third or fourth day, but sometimes it lingers for three or four weeks, but generally it may be said

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that the patient is safe, if he passes the ninth day. The signs of a favourable termination are lateritious urine, the abatement of the heat and fiery redness of the skin, desquamation of the cuticle and the subsidence of the tumefaction; greater slowness of the pulse; the falling off of the sloughs; filling up of the ulcerations, easy sleep and return of appetite.

Dissections. The mucous membrane of the primæ viæ, and lungs is found much phlogosed, that of the stomach is sometimes gangrenous.— congestions of the viscera are also observed, the brain is implicated both in its meninges and in its substance.

When the throat has been affected patches of gangrene are seen, and which sometimes extend through the whole alimentary canal to the anus.

Pathology. Scarlatina is of gastric origin: this is indicated by the anorexia, nausea and vomiting, the appearance on dissection confirms this views of the pathology of the disease. The other symptoms

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<u>Treatment.</u> In its simple form Scarlatina calls for little medical aid: An Emetic of <u>Ipecacuanha</u> or <u>Tartar Emetic</u> should be given: a purge of calomel followed by the neutral salts, and use the mild diaphoretics. In the Anginose form the treatment is more vigorous, attend to the evacuation of the alimentary canal, active vomiting with Tartar Emetic should be instituted, unless bleeding is called for. The Emetic practice is highly efficacious, taken in the commencement, where the system has not been brought into a diseased state, so effectual is the remedy in breaking up the train of morbid association that the attack of the disease offers no security against the recurrence of it, hence some physicians have hesitated in giving emetics.

The emetic should be followed by purging with calomel, this is the most proper purge as it is best calculated to prevent congestions of the abdominal

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viscera which are very apt to occur. When the bowels have been fully evacuated, use the gentle laxatives to keep them in a soluble state.
The bowels having been cleansed, if the pulse is full and hard resort to V. S. the relief afforded by it the appearance of the blood, and its effects on the pulse should direct the practitioner as to its propriety.
The warm and cold bath have both been recommended. "I have used neither says professor Chapman" — in the early and inflammatory stages of the disease, sponging the body with cold water may be resorted to, it affords great relief immersion in cold water is objectionable as in some cases it has proved fatal — sponging with cold water when there is much energy in the system and heat of surface is preferable, and next to this dashing cold water on the body.
The warm bath is recommended where the efflorescence has receded or imperfectly come out; but what has been found very useful under such circumstances

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But there are local affections which also require care: where the throat is affected — volatile linament, Turpentine — leaches and blisters are to be used. Warm applications to the throat afford relief, as hot potatoes mashed and applied round the neck in a cloth or hot mush used in a similar way. — they act by diverting the disease from the interior to the exterior.

Congestions of the abdominal viscera, which are indicated by a sense of weight and pain, are to be managed by topicle bleeding, blisters, and the alterative use of mercury.

To cleanse the foul ulcers of the throat vomiting is of service, the emetic is to be succeeded by the use of some detergent gargle, as a decoction of bark with myrrh, acidulated barley water, or an infusion of cayenne pepper. The following is recommended,

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℞. Cayenne pepper 2 table spoonfulls
Common Salt — 1 — " — "
Boiling water
Vinegar each ℥viij.

Infuse and strain, give a table spoonfull as often as is required. This is used as a gargle and given internally by the practitioners of the west Indies in angina maligna

The treatment of the malignant form is nearly the same: the primæ viæ are to be vacuated by an Emetic - and a purge of calomel is to be given: bleeding is hardly ever admissable. When sinking comes on support the system by carbonate of Ammonia, camphor, spirits of Turpentine, bark and wine, and the ordinary external applications.

Long after the cure of the disease there are certain sequela which may require attention: Deafness may occur arising from the Eustachian tube being inflamed and thickened - time removes this affection.

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Œdema of the lower extremeties frequently follows Scarlet fever: the best treatment for this is bleeding moderate purging and the exhibition of Digitalis; this article will sometimes prove eminently beneficial; fractions, bandages and exercise are to be used.

"In Germany, the use of the bella donna has been proposed as a preventive for this disease. Its author is Hahneman of Leipsic; Berndt of Custrin states that out of one hundred and ninety-five cases of children under fourteen who took belladonna, and were freely exposed to the contagion fourteen only were infected: and that when he afterwards used a stronger preparation of the drug, every one escaped: all those exposed in families, who had the Scarlatina and who did not take the medicine took the disease: whilst those who did, escaped. Other strong testimonies are given in its favour: Kreeff of Berlin states that if the bella donna be taken in proper doses for eight or nine days before exposure, the persons

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taking it are safe. The quantities given are very small: Three grains of the extract are dissolved in an ounce of cinnamon water, and of this two or three drops are given to a child under twelve months and one drop more for every year above that. In general no effect is produced by it: Sometimes however it produces an eruption like that of scarlatina: It renders the attack more mild, if it does not prevent the disease; and if taken four or five days before exposure the disease never proves fatal."*

* Ed. Med. and Surg. Journal January 1825.

For Dr Harriers